

TWELVE YEARS' EXPERIENCE

IN

BLACK RASPBERRY CULTURE

BY H. H. DOOLITTLE,

OAKS CORNERS, N. Y.



THE DOOLITTLE RASPBERRY,
THE SENECA BLACK CAP,

AND THE

GARDEN RASPBERRY,
(FORMERLY CALLED THE RED FLAVORED.)

—o—
PRICE 20 CENTS.

SENT BY MAIL ON RECEIPT OF PRICE. ADDRESS H. H. DOOLITTLE,
OAKS CORNERS, OR DOOLITTLE & WIGHT, WATERLOO. N. Y.

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GENEVA:

R. L. ADAMS & SON, PRINTERS.
1867.

N.Y. State Ex. Station Geneva N.Y.

*Compliments of
J. S. Doolittle Phelps N.Y.
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BLACK RASPBERRY CULTURE

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DEFINITION OF TERMS USED WITH A DISTINCTIVE MEANING.

- { A BUD—is the embryo fruit-branch, blossom or leaf.
- { A GERM—is the embryo cane or bush,
- { A PLANT—consists of the germ and its small roots.
- { A CANE—is a single growth of briery form.
- { A BUSH or HILL—refers to the whole growth of canes from one root.
- { PROPAGATION—refers solely to the process of the formation of the roots of new plants.
- { CULTIVATION—refers to their future tillage, trimming, &c.

CONTENTS.

- 1st.—Introduction.
- 2d.—The Necessity of a Careful Discrimination in the Propagation of Plants.
- 3d.—The Habit of Indiscriminate Propagation.
- 4th.—The Theory of Select Propagation, Illustrated—(Starting Point.)
- 5th.—Method of Layering the Tips to form Good Plants—Illustrated—Good and Bad Plants described.
- 6th.—Public Testimony of the Real Value of this system ; Hardiness of Plants ; Enormous Yield, and Great Value of the Fruit, &c.
- 7th.—Directions for Setting, Cultivation and Trimming. Illustrated.
- 8th.—Remarks and Practical Suggestions. This section is worth \$25 to any one growing an acre of this fruit.
- 9th.—The Seneca Black Cap, See cut on last page of cover,
- 10th.—The Garden Raspberry—formerly called Doolittle's Red Flavored.
- 11th.—Price of Plants—Raspberry and Strawberry.

N. B.—The best time to set plants is the Fall. Then the germs are dormant and not easily broken. The growth also not being checked by transplanting in the Spring, takes on a more upright form, and thus keeps the first crop of berries more from the ground. To prevent all danger from winter-killing, place a handful of any litter or a little coarse manure over each plant, cover the plant a little deeper also ; remove the litter or manure in the Spring.

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As a result of these experiments, Mr. Doolittle obtained the following important results:

1. A style of plants of such native vigor that not one in 1000 will fail to live and grow in any good corn ground, even after being boxed and sent 2,000 miles.

THE

2. A healthy and fruit-bearing growth of canes in hundreds of cases to ten years.

DOOLITTLE RASPBERRY

3. An average yield of 2,000 quarts per acre.

IMPROVED BLACK CAP.

In revising the edition of my Raspberry Manual, published in 1858, I cannot do better by way of introduction than to give an extract from the Northwestern Christian Advocate of October 9th, 1861:

IMPROVED AMERICAN BLACK CAP.

Few native fruits of this country are so widely diffused as what is commonly called the Black Raspberry. As a wild berry it is generally a favorite, but ordinary efforts in its cultivation have not been attended with such success as to warrant its being recommended for general introduction into garden and fruit plantations. Like other valuable fruits in their native state, it is found to have a series of defects that must needs be obviated before it can be pronounced worthy of general cultivation. Some of these defects are: 1st, Small size of the fruit. 2d, Dryness of the pulp. 3d, Excessive seediness. 4th, The short and uncertain period of its bearing habit.

In full view of these difficulties, Mr. H. H. Doolittle, of Oak's Corners, Ontario county, New York, a few years since undertook the improvement of this fruit in the true spirit, both of enterprise and philosophy.

At the end of some four years' almost exclusive devotion to the object, with extensive grounds for observation and experiment, he published in 1858 an instructive pamphlet of 16 pages, from which we are enabled to present some facts of general interest.

Mr. Doolittle has freely and intelligently explained both his theory and practice to the world, so that it may be followed without difficulty. He has conferred a still greater boon upon the fruit-growing public, by introducing to the market at reasonable rates a supply of his purged and improved plants, by means of which any person can commence their cultivation by a much more speedy, sure and economical mode than that of instituting Mr. Doolittle's experiments.

As a result of these experiments, Mr. Doolittle claims to have attained the following important results :

1. A style of plants of such native vigor that not one in 1,000 will fail to live and grow in any good corn ground, even after being boxed and sent 2,000 miles.
2. A healthy and fruit-bearing growth of canes in hundreds of consecutive hills, capable of bearing fruit from four to ten years.
3. An average yield of 2,000 quarts per acre.
4. *A greatly increased size and juiciness of the berry.*

All real improvements in pomology have arisen in a similar manner from some thoughtful person having fixed upon a wild apple, or plum, or cherry, and having by repeated and toilsome efforts wrought out the problem of its proper cultivation. Mr. Doolittle is fortunate in living in an age when merit is speedily recognized, if not well rewarded, whereas many of our forefathers who have contributed to give us the choice fruits of the orchard and the garden, have gone down to their graves "unhonored and unsung." We trust Mr. Doolittle has already been well compensated in a business point of view, and that the end of his good fortune in that respect is not yet; while his name will doubtless remain permanently associated with a real improvement of a valuable American fruit.

The necessity for careful discriminating propagation of Black Cap Raspberries is founded in the nature of the case.

BLACK CAP RASPBERRIES.

In their wild state and as usually seen in cultivated plots, however rich the soil and abundant the care bestowed, a bush or hill will produce but two or three, and many times but one crop of fruit, before it becomes barren.

And still further, knowing as I do the natural laws that govern the future fruitfulness of the young plant, I can select (from the fields and from cultivated plots, where no attention is paid to the laws of select propagation,) hundreds of young plants that never can, by any process of cultivation, be made to bear fruit except a few scattering, seedy, deformed berries the first year.

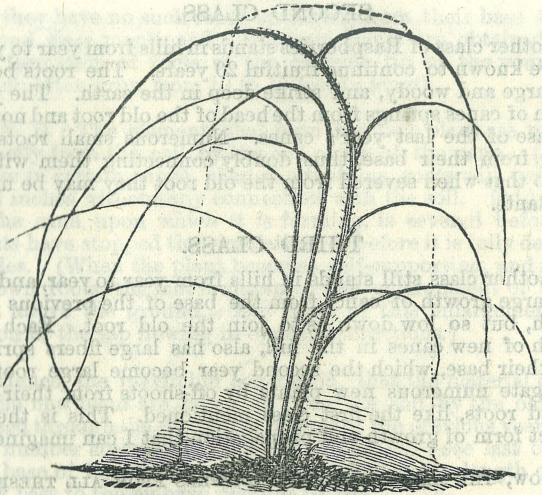


(Figure No. 1.)

BARREN FORM OF HILL.

This is indicated by the vast number of very small and smooth or thornless form of the canes, and by small leaves, generally covered with yellow rust.

(Figure No. 2.)



HEALTHY, OR FRUITFUL FORM OF HILL.

This is indicated by a few large briery canes. The briery form is indicated on only a portion of the right hand cane—but extends over the whole growth—and the number and size or bulky form of the thorns furnish to an experienced eye a sure index of the yield and quality of the fruit to be expected.

To avoid the barren form and obtain the healthy growth of canes is the sole object of select discriminating propagation.

Without going into details, I will simply state the main points :

No positive improvement of the stock can be effected by any culture, trimming or manuring; but the seat of the imperfection being in the root, the remedy must be applied in the formation of the young plant.

This will be evident when we consider that Black Cap Raspberries differ from all other raspberries, blackberries, &c., in the form and nature of its root, the manner of its yearly growth of canes and the laws that govern the formation of new plants.

This can best be done by comparison with other similar varieties. For it will be found that they differ in almost every respect, and hence on this difference, are founded the special laws that govern its peculiarities, and make special propagation necessary.

FIRST CLASS.

Each cane of the Blackberry, and several varieties of Raspberries, are more or less directly connected with a large fresh juicy root. The cane after fruiting, dies. The root, in the meantime, having pushed on by a new growth, in various directions, has sent off from its newly grown parts "offshoots," or new plants, to take the place of the dead cane.

What is noticeable here, is, that these new plants, having drawn all their nourishment during their growth, directly from the soil through the newly formed root, and not through the parent stock or old root, are necessarily perfect plants after their kind.

SECOND CLASS.

Another class of Raspberries stands in hills from year to year—and are known to continue fruitful 20 years. The roots become very large and woody, and strike deep in the earth. The yearly growth of canes springs from the head of the old root and not from the base of the last year's canes. Numerous small roots also, spring from their base, thus doubly connecting them with the soil, so that when severed from the old root they may be used as new plants.

THIRD CLASS.

Another class still stands in hills from year to year, and sends up a large growth of canes from the base of the previous year's growth, but so low down as to join the old root. Each year's growth of new canes in the hill, also has large fibers springing from their base, which the second year become large roots and propagate numerous new plants by off-shoots from their newly formed roots, like the first class mentioned. This is the most perfect form of growth and propagation that I can imagine.

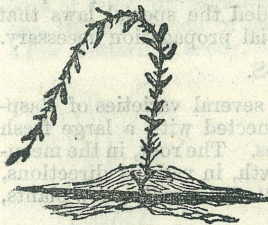
NOW, THE BLACK RASPBERRY DIFFERS FROM ALL THESE :

1st, In the form and nature of the root.

It has no large fresh annular growth of root like the first and third classes mentioned above, nor very large deep-set roots like the second class, but consists of small, very dry, and woody fibers, extending in a net-work for several feet, and which seem to attain their full size and extent the first year.

2d. The yearly growth of canes in the hill is not connected, each with its own root, as in the first class. They do not spring from the head of the main root like the second class. But like the third class, they grow out of the base of the previous year's canes. Yet, unlike them, they spring from the old cane so high up as to have no union with the old root, except through the stump of the old cane.

Thus from year to year, there is a growth of fibers higher up on the base of the canes till the stump of the first year's growth is covered over or woven in with these small roots, thus elevating the hill above the surface soil.



(Figure No. 3.)

agined than described.

3d. New plants do not spring spontaneously as off-shoots, from newly formed roots as in the first and third varieties mentioned—nor by severing the young canes from their parent stock,

for they have no such roots springing from their base as in the second class mentioned. But new plants are obtained only by the formation of roots at the extreme tip of the young canes, which often grow from 10 to 15 feet in length.

N. B. The elements that form the new plant are not drawn directly from the soil by the end or tip of the cane. (1st.) Because in certain moist, shaded situations, roots will project several inches without any connection with the soil. (2d.) Because if the cane, upon which it is forming, is severed before heavy frosts have stopped the circulation, or before it is fully developed, it dies. (When the plant becomes self-supporting, and is fed by its own roots, the fact is shown by the enlargement of the cane just above the ground. The cause of this enlargement is the union of the sap flowing in opposite directions.)

Hence, the inevitable conclusion, that the material elements of the new plant are taken up from the soil by the old roots—passed through the successive stumps of the previous year's canes, (in number according to the age of the hill—see last cut,) into the base of its parent cane, through the whole length of which they pass to the embryo plant at its tip.

These being the habits—the natural laws that govern the whole growth of root, canes and new plants of the American Black Raspberry, the effect on the future bearing habit of the young plant may be stated variously—thus: The new plant is really and truly a portion of its parent cane—or the new plant has the same bearing habit of its parent cane—or the new plant has the same general age of the hill from which its parent cane sprang.

THE HABIT OF COMMON INDISCRIMINATE PROPAGATION, AND ITS CONSEQUENCES.

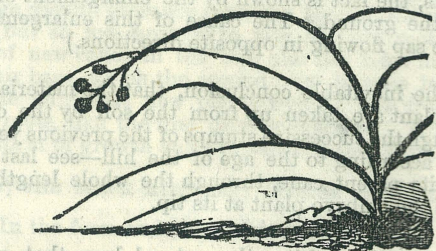
Canes of every degree of fruitfulness will propagate new plants, except in the most extreme case of exhaustion. On the principle that any plant that has suitable roots is a good plant, the common practice of unskilled cultivators is to cover indiscriminately the tips of all canes. The consequences are, a general tendency to barrenness—developing itself so strongly in some plants that they take on the barren habit (see cut 1st) from the very first, others after the first crop, &c.

That these results will follow indiscriminate propagation, is evident from what has preceded. Because, if the roots of a hill are so old—or have become so exhausted from any cause as to be unable to produce healthy fruit-bearing canes, the plants partake of the same nature. Or if the juices, taken up by the root, in passing through the unhealthy and decaying medium of the stumps of the previous year's growth, have imbibed in any degree the elements of decay and barrenness, and have deposited them in the formation of the cane, they will also, in the formation of the plant at its tip. Or finally, as "like produces like," if the young plant inherited barrenness in its propagation, it may make quite a luxuriant growth, but it will be of the barren form.

THEORY OF SELECT DISCRIMINATE PROPAGATION, AND ITS APPLICATION ILLUSTRATED.

To obtain plants of full life and vigor—plants that will take on a full bearing habit from year to year.

1st. Discriminate as to the canes used. The theory demands that the first growth from young plants only should be used in this propagation.



(Fig. No. 4.)

The above cut represents the growth which a young plant attains by the 15th of August or 1st of September.

When the tips of the trailing canes become naked or free from leaves, and of a red color, it is ready for layering. Plants formed from this growth, receive their nourishment directly from the soil through new formed roots and canes, without passing through any unhealthy and decayed medium as is unavoidable in propagating from older hills. This mode makes it necessary to set out a new plot of plants every spring from which to propagate.

It will be readily observed that the theory supposes that the plants used for this propagation are themselves free from imperfections of bearenness, &c. For if wild plants, or those that have been propagated indiscriminately are used as the stock, the application of the theory will only perpetuate their imperfection.

So much for theory. But the first year's growth does not furnish any sure grounds of judging of the plant's future fruitfulness, but the second year's growth does. This made it necessary to depart from the theory, and by a discriminating examination of this second growth of canes propagate only from those selected for their fruitful tendencies, and then return with these selected plants to the theory.

In point of fact, plants propagated with experienced discrimination from two year old hills, upon which the theory has had its past force, are quite as good as those propagated from the first year's growth. I shall therefore continue to propagate them, making no distinction between them and those from one year old plants.

STARTING POINT.

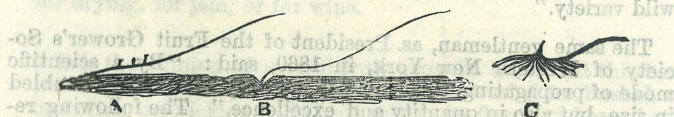
The question naturally arises then, what was my original stock.

[Some fifteen years ago, Mr. Joslyn, of Phelps, N. Y., commenced the propagation of plants from stock which he had originally taken from the woods, but which in fruiting seemed so superior as to warrant the belief that the original stock was an accidental seedling. These plants shortly obtained some reputation in the neighborhood and went by his name.

Believing that something more systematic and thorough in the propagation of plants ought to be attempted, in 1854 I purchased of him 200 of his best plants.]

DISCRIMINATION AS TO THE METHOD OF LAYERING
THE TIPS SHOULD BE EXERCISED.

Thus, with the corner of a hoe excavate the soil under the tip to be layered, let the tip fall in, put back the soil and press down with the hoe, thus leaving the surface level and the tip fastened in with a downward dip of about two inches. (See B in cut below.



This will cause the germ of the future plant to form from or out of the very extreme point of the cane. (C is a plant thus formed—and all plants formed naturally or of their own accord, take this form.

The common, if not the universal method among indiscriminate cultivators, is to cover the end of the cane for several inches as it lays on the surface of the ground, as in A of the cut above. The result is from two to four of what they call plants. For each joint-bud or bud of the future fruit branch under which roots form, is thus forced into the form of a germ or embryo plant. The tip in the mean time has grown on through the surface covering, and is left uncovered, and thus the true plant is lost.

This matter of good and true plants is of the greatest importance to buyers, and to me too in maintaining the reputation of the raspberry.

A good plant, supposing the stock to be good and true, (which through the length and breadth of the country, has become sadly deteriorated by mixing in wild plants and careless propagation,) consists of a mass of fibrous roots spread equally around and centering in a crown, from the centre of which rises the germ. See C in last cut. The amount of roots is no criterion; it is the proper centering of a sufficient quantity of fibrous roots directly under the germ that has been formed from the tip of the cane that makes a good plant. Any amount of roots strung along under a portion of the cane, with fruit buds forced into seeming germs, do not constitute plants, yet a thousand of such things are sold every year for good plants.

The germ, too, ought not to be too long, but short and much the heaviest at the base. From these and other causes, I throw away as worthless from 1-10th to 1-2 of my stock of plants yearly. I know that those that buy plants have just cause of complaint, for having had occasion to buy plants for my own use, I found I could not, by any stretch of imagination, call over two-thirds of them plants, and I am now satisfied that I have done my customers an injustice in ordering plants sent to them direct, as purchased from other parties, whose stock I knew to be good. The fact is, that dealers through ignorance or cupidity, not being interested in maintaining the reputation of the fruit, send out everything as plants that have roots on.

PUBLIC TESTIMONY.

Colonel Hodge, of Buffalo, says in the *Gardener's Monthly*: "This variety of late has assumed a prominent position not only in Western New York, but also in some other parts of our country. Among all the smaller fruits, perhaps there is nothing more productive, or that can be grown, gathered and marketed with as little labor as this berry. These plants have uniformly produced fruits of large size and fine flavor, far superior to the common wild variety."

The same gentleman, as President of the Fruit Grower's Society of Western New York, in 1860, said: "By a scientific mode of propagating, this fruit has not only been nearly doubled in size, but also in quantity and excellence." The following remarks were made at the same meeting:

Trowbridge.—"No other raspberry in the market brought as high a price."

Hooker.—"I propagate it for market purposes. It is different from the wild—of far larger size, better flavored, and more delicate. It is prized above all the raspberries of the season."

Doctor Kennicott, of Illinois, speaks very favorably of the variety, so far as grown under his observation.

Mr. Knox, of Pittsburgh, says: "It is much superior to the common Black Cap. The fruit is sweet, juicy, and very large, sometimes measuring three quarters of an inch in diameter. One advantage it possesses over all others, is its hardness, it never requiring any winter protection."

In conclusion, it may be remarked that although the Doolittle Black Caps are only just beginning to be introduced into Illinois and the Northwest, yet all the experiments as yet heard from, promise fully to equal its success in Western New York and Pennsylvania.

American Agriculturist, 1866, page 145.

The improved varieties of the Black Cap have now become so popular, that nurserymen find it difficult to keep up with the demand. They have indeed valuable qualities; they need no covering in winter, do not send up any suckers, are great bearers, and the fruit is so firm that it reaches market in good condition, and it finds a ready sale. Doolittle's Black Cap is the one most cultivated.

In the Rural Annual for 1860, published by J. Harris, Rochester, N. Y., Mr. H. E. Hooker, nurseryman and fruit grower, writes thus: "It is with great pleasure that we have now the means of introducing to our readers a variety of this fruit which combines the valuable qualities of good size, beauty and first rate quality as a table and dessert fruit—with so great vigor, hardiness, and productiveness, as to compel us to give it the first place in our list of small fruits. The variety of which we have said so much in advance is called the improved Black Raspberry. It was introduced by H. H. Doolittle, of Oak's Corners, Ontario Co., N. Y."

Moore's Rural New Yorker, June 16, 1866.

THE DOOLITTLE RASPBERRY.—A. Babcock, of Benton Harbor, Mich., writing to the Country Gentleman, says: The merits of this raspberry are not, in my opinion, yet fully known or appreciated by the rural population of this country. It should find a place in the garden of every family having control of a single acre of good land. It is very hardy. It is as certain to produce a crop as the potato. Its culture is simple. I know of no berry that is equal to the Improved Black Cap Raspberry for canning, for drying, for jam, or for wine.

It is the opinion of several fruit growers here, that this berry can be grown about as cheaply as wheat, bushel for bushel, not including the picking. No fruit retains its flavor, or keeps better when canned, than this raspberry. It is easily and rapidly dried. Dried raspberries are now worth 60 cents per pound in Chicago. Three pounds of the fresh berries will make about one pound of dried fruit. The time is not far distant, in my opinion, when 20 bushels of this berry will be grown for every single bushel now produced. There is no reason why any family having any land, may not have a liberal, understand me, a liberal supply of this wholesome and delicious berry, not only during its reason of ripening, but during the entire winter and spring; not once a month or week, but every day should a goodly quantity of this, or some other good fruit, be seen upon our tables. You can have a good supply of this raspberry when the peach, pear, cherry, blackberry, and even the apple fail you; therefore I urge you to plant for your use, from 200 to 500 plants, according to the size of your family. You will never regret it, I assure you. More berries and less pork. As pork goes out of fashion the demand for canned and dried berries will increase, of course.

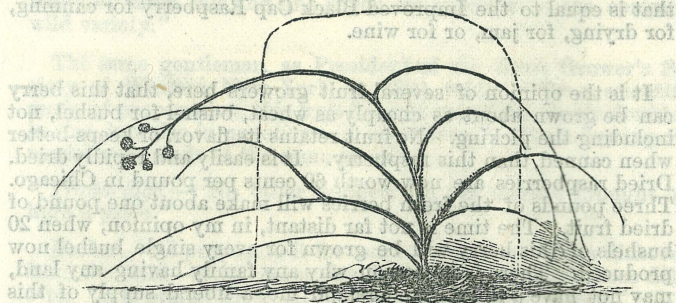
THE YIELD IS ABSOLUTELY ENORMOUS.

G. F. Wilcox (now associate editor of Rural New Yorker) wrote for that paper September 1st, 1860, "I have known them to exceed 2,000 quarts for first crop by nearly one-third on a patch of an acre."

Phineas Allyn, of St. Joseph, Mich., states to Farmer's Institute Club, New York, that a neighbor of his, from 1,300 hills, marketed 45 bushels first crop, and Dr. A. C. Fish, formerly of Rochester, N. Y., from 8,000 plants sold 500 bushels.

Soil.—Any good corn land may be used—a position shielded from the range of heavy winds is desirable. A partial shade, as a young orchard, is no injury. Having plowed the land, strike furrows in the direction you wish the rows to run, three inches deep, and six or seven feet apart, leaving the bottom of the furrow broad and level. Cross mark, with corn marker, three to four feet apart; my rule is three and half feet apart, in rows, and rows seven feet apart.

Trimming.—They will need no trimming the first year. Let the growth trail on the ground and in the spring cut all off to within one and a half or two feet of the root; it seems wasteful, but must be done.



There will now spring up large upright canes, and when they are two feet high pinch or cut off their tips. This will throw the growth into branches, make the main canes stiff, prevent them from being broken down by wind and obviate the necessity for stakes and lashing to support the next crop of fruit.



This represents a bush of one year's growth, mulched with straw to keep the fruit from contact with the soil, and to keep the soil loose and moist during the ripening of the fruit.

This mulching is not necessary. The line across the three new upright canes is about the point they ought to be clipped the last of June or when the berries are about half grown.

SECOND YEAR'S TRIMMING.

[See cut No. 2, on page 5.]

The cut referred to represents the full growth of the young canes of last cut that ought to have been clipped at the point where the middle cane begins to bend. The dotted circle indicates the point at which all the side branches should be trimmed off. This should be done early each spring, and then such shallow cultivation as is sufficient to keep the weeds down is all that it needs till after fruiting, when at once cut away all the old wood and cultivate the ground. The next spring the same directions as above apply.

CAUTIONS, SUGGESTIONS AND PRACTICAL INSTRUCTIONS

It will take about 1,800 plants to set an acre according to my directions. After berries have blossomed never cultivate or hoe any deeper than is necessary to keep the weeds down, lest you break the rootlets that are carrying food to the forming berry.

After July never clip or break any of the growing wood, lest new branches grow that will not ripen their wood before frost comes, and thus become winter-killed and cause a blight to the whole hill.

In picking berries for a distant market be sure that all are fully ripe; partially ripe berries become soft and sour in half the time fully ripe ones do.

Use ventilated boxes—not more than three inches in depth—square boxes with elevated bottoms, so as to pack one upon the other without shelves or drawers, are the best.

I trim with a sharp corn cutter, or part of scythe blade (kept sharp) with quick, well directed strokes on all sides of the hill.

If asked how much *will* an acre yield, I answer, just as much as you *will* bestow labor and pains to that end, even 5,000 quarts; but 2,000 quarts is an average yield with ordinary care.

A good hand can pick 75 quarts a day; 50 is a good day's work in good picking; 35 an average during the season.

Where hills are missing take a shovelful of earth from where the missing hill stood, and then gather up the trailing canes from the adjoining hills and cover deeply the ends or so much of them as you can make reach the hole. If done in the fall or early spring, they will take root and fill the open space with fruit.

To nearly double the yield of the first crop, to make the picking easier, and to steady the bushes and keep them from being whipped about on the ground in a storm, turn a furrow three inches deep and one foot distant from the row, away from the hills on the *west* side of the row, then with a fork or some such tool gather all the trailing canes or so much of them as you can make bend around and tread them into the furrow, shoving upon them sufficient earth from the edge of the furrow to hold them in their place, till the furrow is turned back in its place. This saves trimming except now and then a loose cane, and nearly doubles the yield, &c. This is worth \$25 per acre to growers of this fruit.

When you propose to plow up an old plot (which I generally do after the third or fourth season) in the spring after the young canes have grown about one foot in height, break or tear them away from the base of the bearing canes, the operation will have to be repeated twice. The result will be larger and better berries and from one-fourth to one-half more than if these canes are left to grow, for the whole force and vigor of the root is now turned to perfecting the fruit instead of growing the canes to be plowed up, besides not having the young canes in their way, hands will pick at least one-fourth more per day. This suggestion alone is worth \$25 to every one with an acre of berries.

MISCELLANEOUS ITEMS.

ORIGIN OF THE NAME "DOOLITTLE," AS APPLIED TO THIS BERRY.—After my efforts had attained success, the berry was known as the Improved American Black Raspberry, and such was its great popularity, that at the meeting of the American Pomological Society, held at Philadelphia, Pa., September, 1862, when the question came up as to its value, &c., it was, upon the motion of Mr. Hovey, of Boston, named the "Doolittle," and recommended for trial.

All of the principles stated and directions given in this work, apply equally to the two new seedlings, the Seneca and Garden Raspberries, as well as the Doolittle.

A few years ago I made large quantities of Wine from the Doolittle, but desisted because the berries were in such demand; but should the market become glutted, the berries can be profitably made into a medicinal wine, astringent and tonic, a remedy for common summer complaints, common diarrhoea, and very useful as a medium for mixing other tonics, &c. The following receipt is the result of many experiments and is right:

RECEIPT FOR BLACK RASPBERRY WINE.

Provide a barrel or cask with bung; if it holds more than you wish to make it is no matter. Take 4 quarts dry or 5 quarts wine measure of good ripe berries for every gallon of wine you wish to make. Mash or reduce to a fine pumice and add to the mass three pounds good sugar (once refined) for every gallon of wine, with warm soft water sufficient to make the mass liquid. Prepare a barrel with holes in the bottom and clean straw like a leach, and put the mass to drain through, and add to the pumice as it becomes dry, lukewarm soft water till you have the desired quantity of clear liquor. Place the cask in a secure place in a cool cellar. Make the bung $1\frac{1}{2}$ inches long and bore half way through it from the top with half inch bit, and the rest of the way with gimblet—insert half inch lead tube 10 or 12 inches long and make both bung and tube air tight in their places by putty or wax. Now with a tumbler of water sitting near the bung, bend the tube over until the end dips under the water. In this way the gas will escape in bubbles through the water, but no air can reach the wine, and if the bubbles cease before about six weeks see to the putty around the bung and tube. When the bubbles cease it is fit for use, but keep bunged tight without racking off and it will improve by age.

A crop of early corn can be profitably grown between the rows of young plants the first year. Early potatoes, cabbage, peas, beans, and any garden truck that does not spread on the ground and will come off the first part of August.

In hoeing the first year be very careful and not hill up the young plants, but drag the dirt away from the hill as much as possible and not uncover the roots of the plant. A little too much earth on the roots will not much retard the growth, but September first the young canes will begin to turn black in the centre, and proceed rapidly downward to the root and the plant dies.

A part of a hill sometimes becomes barren. Take this away from the root leaving the briery part, and although small it will grow to a good hill. Where a hill is wholly barren in the form of its canes, tear it all up, it cannot be made good.

A plot of young plants may be set five feet apart, taking up the same ground and requiring the same number of plants per acre, (1,800) as if set $3\frac{1}{2}$ by 7. This will allow the cultivator to be used both ways as long as the plot lasts, but I do not like it as well as $3\frac{1}{2}$ by 7. It is always best in setting out a large field, to leave roads every 10 or 12 rods across the rows, in order to draw out the brush, &c.

THE SENECA BLACK CAP.

See Cut on last Page of Cover.

Editorial article accompanying the cut in Moore's Rural New Yorker, August 31, 1867.

"Since the Doolittle Black Cap Raspberry has come into extensive cultivation, growers of this fruit have greatly desired another which should ripen a week or two later, in order to supply the market or table fully up to the time of Blackberries. This quality of late ripening is of much greater importance than that of earlier maturity. The Seneca Black Cap, which we here-with illustrate, is offered as a candidate for this position.

"It has been heretofore mentioned in the Rural, and described by Mr. Doolittle as a seedling grown 7 years ago by Mr. Dell, of Seneca County, N. Y., from the Doolittle Black Cap, possessing the same characteristics of hardiness, fruitfulness, firmness and flavor of fruit, the same habit of growth and propagation, and as being from seven to eight days later in its period of ripening. We received, in their season, several boxes of this fruit from Messrs. Doolittle & Wight, and these specimens justified its claims as to flavor, size and firmness. We also had the pleasure of examining their plantation at Waterloo, N. Y., where the Doolittle and Seneca were growing in the same field, and were satisfied of the good qualities of the plant, and from the best information we could collect, concluded that the period of ripening its fruit was later than that of the Doolittle, and that it is a valuable addition to our list of berries."

The further history of this berry is this: Three or four years after originating this seedling, Mr. Dell died, and the value of its habit of late ripening not being appreciated, during the settlement of the estate it became nearly extinct. But, Mr. Warren Wight, a young man living near Waterloo, N. Y., being about to commence fruit-growing, gathered up the fragments from the grass and weeds, and named it the Seneca Black Cap, in honor of the County and River near which it was originated.

In the summer of 1866, one of the Maxwell brothers, Nurserymen, Geneva, N. Y., being on my grounds during berry-picking, asked me why I did not get, or said I ought to have the Seneca Black Cap, remarking that it was a larger berry and *two weeks later*. The week my picking closed, I visited Mr. Wight, and found them still picking berries from the Seneca. The soil was a hot, almost drifting yellow sand, and upon visiting other plots of the Doolittle berry in the neighborhood, I found that their picking began and closed three or four days earlier than with me. I am fully satisfied with what I saw there and have seen this season, that it is not two weeks, but a full week later than my berry—*i. e.*, the Doolittle.

The bush is also a ranker grower, and to-day, August 20th, there is evidence of its late habit, for while the tips of the canes of the Doolittle are ready to layer for forming young plants, the Seneca's growing side by side under the same cultivation show hardly the first signs of readiness to layer. The bush is not only a ranker grower but the berry is uniformly larger, the flavor decidedly sweeter, and the berry, while juicy and far from dryness, has a peculiarly firm texture and will market 500 miles from home as well as the Doolittle does 100.

During the twelve years of my culture of the Doolittle Raspberry I have received a great many letters, and been visited by numerous fruit growers inquiring if there was not some method of culture, or trimming, or planting on north side of hills so as put back the time of ripening of a portion of their grounds, if only three or four days. For every grower knows as their pickings begin to grow less the demand for the berries increases and the price runs up just in proportion as their berries decrease. How lucky those will be for a few years to come who have a good crop of Seneca Black Caps to put into the market at such times, I leave fruit growers themselves to decide.

Another point upon which I have been much consulted is "what softer, less seedy berry than the Doolittle?" I could recommend, that would not fill their grounds with succors and off-shoots. They had tried the Allen's, the Antwerps, the reds, and yellows and orange, and all, like blackberries took possession not only of their own plot, but of all grounds within their reach.

The attention of all such is invited to my new seedling heretofore called Doolittle's Red Flavored Black Raspberry, but now as indicating its true position among fruits, I call the

GARDEN RASPBERRY.

It originated thus eight years ago. Having thrown a quantity of seeds and refuse (after making wine) from my Black Raspberry upon the manure heap, young plants came up wherever the manure was scattered. Wherever they could be permitted to stand I left them; others I transplanted, and when they fruited, unless they seemed superior or different from the original, I tore them up. This is the only plant that I finally saved. Its whole growth seems a cross with the Red Raspberry. The canes are not so rank and thorny as the Black, but are more numerous. The berries are as large and the yield is as good as the Black. The time of ripening is nearly the same or only two or three days earlier.

The color of the berries is a dark red or brown, as if red and black were mixed. I think they make the best berry pie that ever was eaten. Being very juicy they will not probably bear distant transportation, but for a home market and family use they will supply a long felt want—a garden berry, rich, juicy, productive, of good size, and as hardy as the oak. For a home market and family use this berry will supply a long and widely felt want, because standing in hills and being propagated from the tips of the canes and not by off-shoot or sucker it is free from that serious objection to all other soft raspberries and blackberries. This berry being less seedy than the Black Cap is much esteemed for the table, and drying and canning and all culinary purposes. It is two or three days earlier than the Doolittle, and a most prolific bearer.

Another feature adapting it especially to Garden culture, is its *permanency* of good habits. The seven year old original plant left to struggle with weeds and grass, without manure, hoeing or any cultivation, yielded this season at least four quarts of berries, as large as the average size of those in cut of Seneca Black Cap. Here is a very promising feature of this berry : every one visiting my grounds noticed the rank growth and uniform large size of this neglected old original hill, and passing on from those next oldest to the youngest, there was a regular falling off of rankness of growth and size of berries, while the cultivation and care was exactly the reverse—i. e., the best on the young bushes.

The following article from Moore's Rural New Yorker, August 24, 1867, explains itself. Having thus signally failed in getting the authorized Committee together, after having spent from twenty-five to thirty dollars, I do not think it proper to add the testimony of neighbors and personal friends to the merits of these two new berries.

THE COMMITTEE ON NATIVE FRUITS.

What can be done to get the Committee on Native Fruits of our Western New York Horticultural Society to do their duty ? Last September I published a long article in the Horticultural page of the Rural, setting forth the claims of two new Raspberries. At the late meeting of the Society, a letter from me was read, inviting said Committee and all others to investigate these claims. Still later I put a prominent advertisement in the Rural, appointing a day when both berries would be in their prime. But failing to get any of the Committee on that day, I made a trip to Rochester, and after getting a promise of attendance from one of the Committee, whom I found there, I wrote to all the others, appointing a day when I would meet them at the cars, but did not succeed in getting any of them on the ground.

J. J. Thomas writes he was gone from home ; have not heard from the others.

Now what more could have been done ? If this Committee is appointed as a safeguard to the public, do they not owe fruit growers an apology ? Can we be blamed if after this we put our plants in market as being in fact all we claim for them ?

H. H. DOOLITTLE.

Oaks Corners, Ontario County, N. Y.

PRICE OF PLANTS

FOR THE

Fall of 1867 and Spring of 1868.

PRICE OF PLANTS.—I make the propagation of these plants a specialty, and attend personally to their assortment and packing and intend to serve those who favor me with their orders, as I would wish to be dealt with by others.

Having associated with me in partnership, Mr. WARREN WIGHT, of Waterloo, N. Y., and six acres of young plants being located there, and six acres at Oaks Corners, N. Y., we request those writing from the West to direct to H. H. DOOLITTLE, Oaks Corners, N. Y., and those ordering from the East, to address DOOLITTLE & WIGHT, Waterloo, N. Y. I give my personal attendance to both places, but this will divide the labor of correspondence.

Price of this book 20 cents, sent by mail postage paid; but is sent free to all ordering \$2 worth of plants at the following rates:—20 plants of the Doolittle, securely packed and sent by mail, postage paid, for \$1; 100 plants expressage unpaid, for \$3; 1000 or over at \$20 per 1000. This will be the standard price of the Doolittle.

The price of the the two following will vary from year to year. The Seneca Black Cap and Garden Raspberry plants we put at one-third the usual rates for such new and rare plants, thus putting them in reach of all.

N. B.—Where a few of each kind are sent in the same package, the Garden Raspberry will be lashed together by *colored* twine; the Seneca, by *white* twine, and the Doolittle without any.

One plant of Garden Raspberry and one of the Seneca Black Cap, or two of either kind will be sent by mail, postage paid for \$1; 12 in the same way for \$5; 100, expressage unpaid, for \$25; 1000 or over at \$200 per 1000. A receipt for the money, (and when \$2 worth of plants are ordered, the book also,) will be forwarded by return mail after receiving each order. Be careful in giving your address. Write plainly your Name, Post Office and State.

We shall commence filling orders for plants in the rotation in which they have been received, about October 15th. Address.

H. H. DOOLITTLE,

Oaks Corners, N. Y.

Or

DOOLITTLE & WIGHT,

Waterloo, N. Y.

N. B.—No charge for packages.

These prices are for the Fall of 1867 and Spring of 1868.

PRICE LIST OF STRAWBERRY PLANTS FOR THE SPRING OF 1868.

Wilson's Albany, Russell's Great Prolific, and Scott's Seedling, sent, postage paid, by mail, \$1.25 per 100; by express, unpaid, \$1 per 100, \$8 per 1000. The Great Agriculturist, the Green Prolific, and the Triumph de Grand, \$2 per 100, by mail, postage paid, or by express, expressage unpaid, \$1.50 per 100.

Address

H. H. DOOLITTLE,

Oaks Corners, N. Y.

Or

DOOLITTLE & WIGHT,

Waterloo, N. Y.

DOOLITTLE'S ANTI-SORE OINTMENT, FOR THE CURE OF CHILBLAINS, FROZEN FLESH, CORNS, BURNS, &c.

No apology is necessary for introducing this to your notice, if you are a sufferer during winter from these causes or know what agony many endure with whom you daily mingle.

For many years I tried every remedy; I used between 50 and 70 boxes of one kind of ointment, not solely for chilblains and corns, but as a general cure in the course of a few years. I got tired of this and determined to try for myself, because several times during my life, my attention had been strongly called to the curative properties of certain articles, some of which are not generally known as possessing medical qualities, especially that of preventing pain and soreness in cases that would have been exceedingly sore and painful.

I will give one instance, when a young man I smashed a finger so that the skin burst in three directions, and forced out the blood and flesh to the first joint. A lady that was present ran home and brought back an article that prevented all soreness, and at the expiration of four days I removed that dressing and had no more trouble from it. The question has frequently for the last thirty years forced itself upon my mind "why not combine *this* and *that* and the other article in some preparation to prevent and cure sores, and relieve inflammation."

The result was, I was obliged to satisfy my own mind, to prepare this ointment, which I call *Anti-sore*, because it not only heals and removes soreness and pain, but prevents or forestalls it. Thus, its immediate application to a scald or burn where the skin is not broken, ends it. So with frozen flesh, if applied at once, no swelling or soreness will follow; and if not used till it has become inflamed and the skin black, a few hours will suffice to change the skin to its natural color and remove the soreness and swelling.

So with common chilblains, you need not suffer *one minute* all Winter, if you will commence its use in the Fall when the first symptoms appear. This refers to common chilblains. Some have had their feet badly frozen or chilled at some point in their life, (some even in early childhood, and have never had in winter a moments quiet from that burning and tenderness that is easier felt than described.

In such cases the difficulty is chronic. The membrane between the skin and flesh is destroyed so that it can be felt under the skin in rolls and little bunches or kernels. During summer all is quiet, but the first little chill to the feet brings on that intolerable itching and burning, blistering and turning black, &c. In this stage, it seems that nothing can give even temporary relief; but commence in the early fall the faithful use of my Ointment, at the first symptom of uneasiness, and thus keep them subdued for one winter, and I believe nine cases out of ten will be permanently cured. Five years ago when I commenced its use—al-

though my feet was not so bad as some I have known—yet with large, painful corns on each large toe, and chilblains so bad that I did not expect quiet night or day, I commenced its use early in the Fall, and thus during the entire winter forestalled each symptom of soreness, and now for four years I have been free from both corns and chilblains.

A thorough, permanent cure was effected; the healthy action of the skin and of that membrane or lining between the flesh and skin, (where the difficulty in all bad cases resides,) was restored. My feet are now like an infants for soundness. I know what peace and comfort and a "good understanding" is. I would not be placed back with all that halting, crippling, restlessness and pain, that I used to experience five years ago, for all I am worth—raspberries and all.

Shall I keep all this to myself, or shall I incur the risk of being called Quack, Patent Medicine man, for putting this medicine within the reach of others. I intend to keep right straight on about my business, and that is to do (in all things, and not such only as may be popular,) unto others as I wish others to do to me. Therefore, let me give you a list of remedies or expedients to relieve chilblains and corns.

First in the list is a class that in my travels last winter, I found resorted to as a last means to get relief. Red pepper preparations, various heating, pain killing medicines, and hot water, which had to be used to effect relief, constantly hotter, till absolutely scalding water was needed to give relief. I found several cases where the skin of their feet was completely parboiled, and in all cases where this list of violent remedies was used, nothing but temporary relief was obtained, and in many cases the skin of their feet was positively cooked, its healthy action entirely destroyed, and must slough or peel off, and the inner membrane could be seen or felt to be in rolls or lumps. Another winter's suffering is before all such. Dry salt worn in the socks is recommended. Work as much salt into butter as possible; heat it in. Epsom Salts dissolved in as little water as possible. Soda and Saleratus also, in strong solution, with a caution not to use where there are blisters; heat in. Sulphate of Zinc one ounce to two and one-half pints soft boiling water; do not apply where the skin is off, for the zinc is poisonous.

Here is the great German remedy, called "Wahler's Frost Cure," kept secret until recently purchased by the government of the kingdom of Wurtemberg and made public. Twenty ounces mutton tallow, twenty-four ounces lard, four ounces peroxide of iron, (red iron rust,) four ounces Venice turpentine, two ounces oil bergamont, two ounces bole armemon; heat tallow, lard and iron in iron dish, stirring constantly with iron spoon till it assumes a perfectly black color, then add the other ingredients gradually, stirring all the while; spread on linen cloth and apply daily.

There are also before the public hundreds of ointments, salves, magic oils, &c., that among all the other ills that flesh is heir to, profess to cure chilblains and corns.

I do not call my ointment an universal panacea. It will not cure consumption, indigestion, nor any disease of internal organs. I do not recommend it for scrofula, salt-rheum nor any sores that have their origin in impure blood. But for common

Chilblains, Frozen Flesh and Burns, its action is quick and certain. It prevents the swelling, throbbing and soreness of **Cuts, Bruises, Sprains, Fractures of the Skin and Blisters**, if applied at once after the injury. It cures **Lameness of the Back, Pains in the Side and Chest**, where the seat or cause of the difficulty is in the muscles or near the surface, as in cases of **Sore Throat, Swelled Tonsils, &c.**

I do not propose to publish these cheap, stereotyped certificates, but will state a few cases.

The wife of Leroy Gordon, Groceryman, Geneva, N. Y., a few years since froze her feet, since then, large lumps like butternuts, accompanied with intolerable burning, &c., making it impossible for her to wear shoes many times, or to sleep nights. In this state she applied this ointment at night, heating in thoroughly, and this "effected a complete cure" is the testimony.

Obed Barlow, Miller, Oaks Corners, N. Y., had on the ball of his foot what is called a frog corn; a large horny callous, and so sore and painful underneath as at times to cripple him. Corn plasters, and all remedies heard of had been used, till he commenced (without any encouragement from me,) the use of my ointment, heating it in most thoroughly night and morning, and in three days a very sensible relief was observed, and in twenty days all vestige of the callous was gone, and he could jump and stamp with his foot without pain.

Myron Cowley, Produce Dealer, Auburn, N. Y., purchased a box of me on the cars one day, saying he had been almost laid up several weeks with a lame back, so severe that he had to be helped up from bed, &c. On going to bed that night he heat the ointment in by the stove, and in the morning he jumped out of bed as limber as as a boy, and eight days after, when I went to Auburn to effect sales, he reported himself perfectly cured, and the case was so well known that I at once sold eighty boxes.

Charles Walker, now of Wolcott, Wayne County, N. Y., before he obtained the ointment had been laid up with a frozen foot, skin black, badly swollen and very tender. In a few hours after its use the skin was changed to its natural color, and in two days he put on his thick boots and went about his usual work.

I spent only the last half of last winter in distributing the ointment, but for evidence of its great popularity among Rail Road employees, address E. Holmes, Station Agent, Oaks Corners, N. Y., or John Page, Section Superintendent, Phelps, New York.

For further evidence of its efficacy in cases of chilblains and general uses, I will refer to Dr. E. Peck, Phelps, N. Y.; C. S. Wright, Postmaster, Oaks Corners, N. Y.; S. E. Norton, Banker, Phelps, N. Y.; C. P. Moser, Druggist, Phelps, N. Y.; Mr. Ingmere, Druggist, Seneca Falls, N. Y.; W. N. Smith, Druggist, Geneva, N. Y.

Price FIFTY CENTS per box; sent by mail on receipt of price. To encourage efforts to introduce it early this Fall, I will send one box extra to any one sending \$2 for four boxes—i. e., five boxes for \$2. To those ordering by express at their own charges, \$3 per dozen, or 25 cents per box. Dealers ordering in this way will be supplied with circulars and posters.

Address with Cash,

H. H. DOOLITTLE, Oaks Corners, N. Y.

OAKS CORNERS, Ontario Co., N. Y. }
 WATERLOO, Seneca Co., N. Y. }

.....186...

Received this day \$..... of the Doolittle Raspberry plants, of the Seneca

Black Cap, marked with white twine, of the Garden Raspberry, marked with colored twine,
 to be securely packed and delivered at the point of starting, without charge.

By mail-postage paid, by express, by freight, to the address of.....

H. H. DOOLITTLE, Oaks Corners, N. Y.

DOOLITTLE & WIGHT, Waterloo, N. Y.

Price List of Plants

FOR SALE BY

DOOLITTLE & WIGHT,

WATERLOO AND OAKS CORNERS, N. Y.

The Doolittle, or Improved Black Raspberry.

Twenty, sent Post Paid, by Mail,.....	\$ 1 00.
One Hundred, by Express, charges unpaid,.....	3 00.
One Thousand,.....	20 00.
Ten Thousand for.....	175 00.

The Seneca Black Cap.

A larger berry and sweeter than the Doolittle, and seven or eight days later, marked when sent in package with other plants by white twine, and the

Garden Raspberry,

A seedling of the Doolittle, as large and prolific, but softer, like the Red Raspberry, but stands in hill like the black, less seedy and better for all culinary uses. This will be marked when sent with other plants, by red twine.

One of each of these two last kinds, or two of either kind sent postage paid,.....	\$ 1 00.
Twelve by mail, postage paid,.....	5 00.
One Hundred, by express,.....	25 00.
One Thousand, by express,.....	200 00.

☞ True and Selected Plants can always be had.

STRAWBERRIES.

Without aiming to keep all the new untried varieties, we shall endeavor always to have on hand the most reliable, well established kinds, pure and true to name, at reasonable rates. Where a few of different varieties are sent in same package, they will be marked by notches cut in a splint of wood attached to each variety, the number of notches corresponding to the numbering of the plants in the following list. For example, Scott's Seedling will have a splint of wood with three notches cut in it, for it is third in this list.

(1.)—Wilson's Albany. (2.)—Russell's Great Prolific. (3.)—Scott's Seedling. Sent postage paid, by mail, \$1.25 per 100, by express, unpaid \$1 per 100, \$8 per 1000. (4.)—The Great Agriculturist. (5.)—Green Prolific. (6.)—Triumph de Gand, \$2 per 100, by mail, postage paid; by express unpaid \$1.50 per 100.

No Strawberry plants ready till the Spring of 1868. We shall commence filling orders about October 15th of every year. The Fall is the best time for transplanting raspberries. For reasons, see my book of 24 pages, with eight cuts, entitled "Twelve years experience in Black Cap Raspberry Culture." Sent post paid, for 20 cents. Address as above.



THE SENECA BLACK CAP RASPBERRY